

## Codes of Conduct/ Guidelines pertaining to Invasive Alien Species<sup>1</sup>

Codes of Conduct/ Guidelines	Relevance to Invasive Species	Date in Effect	Targeted Entities	Organisms Ad- dressed	Pathways/Mean of Transport Ad- dressed	Web Site
North American Fisheries Policy	Article V: "Aquaculture must work closely with federal, state, and provincial regulators to control epizootic disease outbreaks, to prevent the release of exotic species into the wild... Where possible, federal, state, and provincial managers will encourage the aquaculture industry to use indigenous species in its facilities."	1939 (Amended 1955, 1965, 1970, 1973) Current revision approved Aug. 1995	Fishery administra- tors; federal, tribal, state, and provincial managers	Non-indigenous fish and other exotic aquatic species	Unintentional and intentional intro- ductions	<a href="http://www.fisheries.org/resource/page1.htm">http://www.fisheries.org/ resource/page1.htm</a>
IUCN Position Statement on Translocation of Living Organisms: Introductions, Re- introductions, and Re-stocking	Guidelines for planning and assess- ing "beneficial" introductions of alien species  Suggested preparations for species re-introduction  Eradication techniques for undesir- able alien invasive species	4 Sept. 1987	National govern- ments	Non-indigenous plant and animal species	Unintentional intro- ductions: use of live fish bait, tourist transfer, cross- regional civil engi- neering projects  Intentional intro- ductions: release of captive-bred or newly-domesticated organisms, trade in alien species, rein- troductions, re- stocking	<a href="http://www.iucn.org/the_mes/ssc/pubs/policy/tran-se.htm">http://www.iucn.org/the mes/ssc/pubs/policy/tran se.htm</a>
FAO Codes of Practice and Man- ual of Procedures for Consideration of Introduction and Transfers of Marine and Freshwater	Protocol for introducing non- indigenous organisms- ecological considerations (3.1), genetic consid- erations (3.2), inspection and certi- fication (3.3), quarantine (3.4), pa- thology (3.5)	1988	Member govern- ments	Non-indigenous marine and fresh- water species	Intentional intro- ductions: import	

<sup>1</sup> Adapted and updated from Turner (1988), Burhenne & Robinson (1996), products of the Food and Agricultural Organization of the United Nations

Codes of Conduct/ Guidelines	Relevance to Invasive Species	Date in Effect	Targeted Entities	Organisms Ad- dressed	Pathways/Mean of Transport Ad- dressed	Web Site
Organisms	<p>Protocol for introduction of species currently used in commercial practice- inspection and certification (4.1), transport (4.2), handling (4.3), pathology (4.4), control (4.5)</p> <p>Protocol for introduction of species for scientific research- open water stocking (5.1), laboratory handling (5.2)</p> <p>Appendix I: Specific handling instructions for salmonids, molluscs, eels</p> <p>Appendix II: 5 level model for evaluating proposed introductions</p>					
FAO International Code of Conduct for Plant Germ-plasm Collecting and Transfer	Promotes the safe exchange of plant genetic resources	Nov. 1993	National governments; collectors, donors, and sponsors of the collection of germplasm	Plant germplasm	Intentional introduction	<a href="http://www.fao.org/ag/agp/agps/pgr/icc/icce.htm">http://www.fao.org/ag/agp/agps/pgr/icc/icce.htm</a>
ICES Code of Practice on the Introductions and Transfers of Marine Organisms	<p>Recommended procedures and practices to diminish the risks of detrimental effects from introduction and transfer of marine organisms, including those genetically modified. Drafted in co-operation with the FAO European Inland Fisheries Advisory Commission (EIFAC). Requires ICES members to submit a prospectus to regulators, including a detailed analysis of potential environmental impacts to the aquatic ecosystem. Also applicable to freshwater organisms.</p> <p>Procedures recommended for: - Prior to introduction</p>	1994	Public and private interests: governments of ICES member countries, commercial interests, scientific interests	Non-indigenous marine and freshwater organisms, including genetically modified organisms	Intentional introduction	<a href="http://www.ices.dk/pubs/itmo.pdf">http://www.ices.dk/pubs/itmo.pdf</a>

Codes of Conduct/ Guidelines	Relevance to Invasive Species	Date in Effect	Targeted Entities	Organisms Ad- dressed	Pathways/Mean of Transport Ad- dressed	Web Site
	<ul style="list-style-type: none"> <li>- After deciding to introduce</li> <li>- Prevention of unauthorized intro- duction by member countries</li> <li>- Ongoing introductions or transfers</li> <li>- Prior to release of genetically modified organisms</li> </ul>					
IUCN/SSC Guide- lines for Re- Introductions	<p>Meant to allow for introduction of endangered species; mentions non- indigenous species as a threat to re- introduction, but also recognizes potential dangers of re-introduction itself</p> <p>Evaluation of re-introduction site (allows and calls for elimination of specific non-indigenous species): 4a (iv): "Identification and elimina- tion...of previous causes of decline: could include disease;...competition with or predation by introduced species"</p> <p>Unintentional introduction of pathogens 4a (v): "Any animals found to be infected or which test positive for non-endemic or contagious patho- gens with a potential impact on population levels, must be removed from the consignment"</p> <p>Recognition of transboundary mi- gration 4 (b): "In the case of migra- tory/mobile species, provisions should be made for crossing of in- ternational/state boundaries"</p>	May 1995	Practitioners of spe- cies re-introductions (managers, scien- tists, etc.)	Endangered plant and animal species	<p>Intentional intro- duction of captive- bred individuals</p> <p>Unintentional intro- duction of alien pathogens</p>	<a href="http://www.iucn.org/themes/ssc/pubs/policy/reint_e.htm">http://www.iucn.org/the- mes/ssc/pubs/policy/reint e.htm</a>

Codes of Conduct/ Guidelines	Relevance to Invasive Species	Date in Effect	Targeted Entities	Organisms Ad- dressed	Pathways/Mean of Transport Ad- dressed	Web Site
FAO Code of Con- duct for Responsi- ble Fisheries	<p>Art. 9.2.3: “States should consult with their neighboring States, as appropriate, before introducing non-indigenous species into trans-boundary aquatic ecosystems.”</p> <p>Art. 9.3.1: “Efforts should be undertaken to minimize the harmful effects of introducing non-native species or genetically altered stocks... into waters, especially where there is a significant potential for the spread of such non-native species or genetically altered stocks into waters under the jurisdiction of other States as well as waters under the jurisdiction of the State of origin. States should, whenever possible, promote steps to minimize adverse genetic, disease and other effects of escaped farmed fish on wild stocks.”</p> <p>Art. 9.3.2: “States should cooperate in the elaboration, adoption, and implementation of international codes of practice and procedures for introductions and transfers of aquatic organisms.”</p> <p>Art. 9.3.3: “States should, in order to minimize risks of disease transfer and other adverse effects on wild and cultured stocks, encourage adoption of appropriate practices in the genetic improvement of broodstocks, the introduction of non-native species... States should facilitate the preparation and implementation of appropriate national</p>	31 Oct. 1995	National govern- ments; fishing enti- ties; sub-regional, regional and global organizations; and “all persons con- cerned with the con- servation of fishery resources”	Fish	<p>Unintentional and intentional intro- ductions</p> <p>Capture and trade of fish and fishery products</p>	<a href="http://www.fao.org/fi/agreeem/codecond/ficonde.asp">http://www.fao.org/fi/agreeem/codecond/ficonde.asp</a>

<b>Codes of Conduct/ Guidelines</b>	<b>Relevance to Invasive Species</b>	<b>Date in Effect</b>	<b>Targeted Entities</b>	<b>Organisms Ad- dressed</b>	<b>Pathways/Mean of Transport Ad- dressed</b>	<b>Web Site</b>
	<p>codes of practice and procedures to this effect.”</p> <p>Sets out principles and international standards of behavior for responsible fishery practices. The goal is to ensure effective conservation, management, and development of living aquatic resources, respecting ecosystems and biodiversity. Legal and administrative frameworks encouraged.</p>					
UNEP International Technical Guidelines for Safety in Biotechnology	<p>Used as interim mechanism during the development of the Biosafety Protocol; now used for “purposes of facilitating the development of national capacities to assess and manage risks, establish adequate information systems and develop expert human resources in biotechnology.”</p> <p>Paragraph 26: “there is a need for the exchange and supply of scientific information in cases where organisms with novel traits are intended to be released into new environments and when transfer of such organisms is being considered”</p> <p>Paragraph 42: “The potentially affected country should be given notice of the intended use and the opportunity to state whether particular measures will be needed to protect its interests, in particular its biodiversity; (and) should be informed immediately in the event of an adverse effect of the use of an organism with novel traits which could affect</p>	1995	National governments	Living modified organisms	Intentional introduction	<a href="http://biosafety.ihe.be/Biodiv/UNEPGuid/UNEP_I.html">http://biosafety.ihe.be/Biodiv/UNEPGuid/UNEP_I.html</a>

Codes of Conduct/ Guidelines	Relevance to Invasive Species	Date in Effect	Targeted Entities	Organisms Ad- dressed	Pathways/Mean of Transport Ad- dressed	Web Site
	it”  Annex 3: potentially relevant infor- mation for introductions					
FAO International Standards for Phy- tosanitary Meas- ures: Principles of Plant Quarantine as Related to Interna- tional Trade		1995	National govern- ments (FAO mem- bers), regional plant protection organiza- tions	Pests: “Any species, strain or biotype of plant, animal or pathogenic agent, injurious to plants or plant products.”	Unintentional and intentional intro- duction	<a href="http://www.fao.org/WAI/CENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/En/Publ/ISPM/ispms.htm">http://www.fao.org/WAI/CENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/En/Publ/ISPM/ispms.htm</a>
AFS Guidelines for Introduction of Threatened and Endangered Fish	Recognition that introduction of threatened fish can alter biodiversity and survival of other organisms “Restrict introductions to within the native or historic habitat whenever possible” “Prohibit introductions into areas where the endangered or threatened fish could hybridize with other spe- cies or subspecies” “Prohibit introductions into areas where other rare or endemic taxa could be adversely affected” “Examine introduction stock for presence of undesirable pathogens”	1996	Practitioners of in- tro-duction	Threatened and en- dangered fish	Intentional intro- ductions	<a href="http://www.fisheries.org/resource/page17.htm">http://www.fisheries.org/resource/page17.htm</a>
FAO International Standards for Phy- tosanitary Meas- ures: Code of Con- duct for the Import and Release of Ex- otic Biological Control Agents	Meant to “facilitate the safe import, export and release of exotic biologi- cal control agents by introducing procedures of an internationally acceptable level for all public and private entities involved, particu- larly where national legislation to regulate their use does not exist or is inadequate”  Describes the “shared responsibility of the many segments of society	1996	National govern- ments (FAO mem- bers), regional plant protection organiza- tions, exporters and importers of bio- logical control agents	“Exotic biological control agents capa- ble of self- replication (parasi- toids, predators, parasites, phytopha- gous arthropods and pathogens)”	Intentional intro- duction: import for research and/or re- lease into the envi- ronment	<a href="http://www.fao.org/WAI/CENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/En/Publ/ISPM/ispms.htm">http://www.fao.org/WAI/CENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/En/Publ/ISPM/ispms.htm</a>

Codes of Conduct/ Guidelines	Relevance to Invasive Species	Date in Effect	Targeted Entities	Organisms Ad- dressed	Pathways/Mean of Transport Ad- dressed	Web Site
	<p>involved and the need for cooperation between importing and exporting countries so that: benefits to be derived are achieved without significant adverse effects, practices which ensure efficient and safe use while minimizing health and environmental concerns due to improper handling or use are promoted.”</p> <p>“Encourages responsible and generally accepted trade practices, assists countries to design regulations to control the suitability and quality of imported exotic biological control agents and to address the safe handling, assessment and use of such products, promotes the safe use of biological control agents, allows all those involved in the import or release of exotic biological control agents to determine if their proposed actions and the actions of others constitute acceptable practices”</p>					
FAO International Standards for Phytosanitary Measures: Guidelines for Pest Risk Analysis	Describes the three stages of pest risk analysis: “initiating the process for analyzing risk, assessing pest risk, and managing pest risk”	1996	National governments (members of FAO), regional plant protection organizations	Pests: “Any species, strain or biotype of plant, animal or pathogenic agent, injurious to plants or plant products.”	Unintentional and intentional introduction	<a href="http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/En/Publ/ISPM/ispms.htm">http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/En/Publ/ISPM/ispms.htm</a>
IMO Guidelines for the control and management of ships’ ballast water to minimize the transfer of harmful aquatic organisms	<p>1.1: Recognition of ballast water as the “most prominent” medium of transferring invasive species</p> <p>7.1.1: “Every ship that carries ballast water should be provided with a ballast water management plan to</p>	27 Nov. 1997	Member states of the IMO: can apply to all ships	Harmful aquatic organisms and pathogens	Ballast water	<a href="http://www.imo.org/">http://www.imo.org/</a>

<b>Codes of Conduct/ Guidelines</b>	<b>Relevance to Invasive Species</b>	<b>Date in Effect</b>	<b>Targeted Entities</b>	<b>Organisms Ad- dressed</b>	<b>Pathways/Mean of Transport Ad- dressed</b>	<b>Web Site</b>
and pathogens	<p>assist in the minimization of transfer of harmful aquatic organisms and pathogens.”</p> <p>8.2.2: “Port States should inform local agents and/or the ship of areas and situations where the uptake of ballast water should be minimized, such as: areas with outbreaks, infestations or known populations of harmful organisms and pathogens...”</p> <p>9.1.1: “When loading ballast, every effort should be made to avoid the uptake of potentially harmful aquatic organisms, pathogens and sediment that may contain such organisms.”</p>					
New Zealand Department of Conservation Weed Inventory Form	<p>Provides means for documenting weeds which “currently or potentially threaten the indigenous ecosystems and native species present” in an area</p> <p>Records impacts of weeds and estimates need for control</p>	1997		Invasive weeds	Unintentional and intentional introduction	<a href="http://www.doc.govt.nz/">http://www.doc.govt.nz/</a>
FAO International Standards for Phytosanitary Measures: Guidelines for Pest Eradication Programmes	<p>“Provides guidance on the development of a pest eradication programme and for reviewing the procedures of an existing eradication programme.”</p> <p>A programme for pest eradication can be developed by National Plant Protection Organizations as: “an emergency measure to prevent establishment and/or spread of a pest following its recent entry (re-establish a pest free area), or</p>	1998	National governments (FAO members) and regional plant protection organizations	Pests: “Any species, strain or biotype of plant, animal or pathogenic agent, injurious to plants or plant products.”	Unintentional and intentional introductions; also pests already established	<a href="http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/EN/Publ/ISPM/ispms.htm">http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/EN/Publ/ISPM/ispms.htm</a>



<b>Codes of Conduct/ Guidelines</b>	<b>Relevance to Invasive Species</b>	<b>Date in Effect</b>	<b>Targeted Entities</b>	<b>Organisms Ad- dressed</b>	<b>Pathways/Mean of Transport Ad- dressed</b>	<b>Web Site</b>
	a measure to eliminate an estab- lished pest (establish a pest free area)”					
FAO International Standards for Phy- tosanitary Meas- ures: Guidelines for Surveillance	Describes “the components of sur- vey and monitoring systems for the purpose of pest detection and the supply of information for use in pest risk analyses, the establishment of pest free areas and, where appropri- ate, the preparation of pest lists.”  Defines requirements for two types of surveillance systems: general surveillance and specific surveys  Encourages good surveillance prac- tice and transparency	1998	National govern- ments (members of FAO), regional plant protection organiza- tions	Pests: “Any species, strain or biotype of plant, animal or pathogenic agent, injurious to plants or plant products.”	Unintentional and intentional intro- duction	<a href="http://www.fao.org/WAI/CENT/FAOINFO/AGRICULT/AGP/AGPP/PQ/En/Publ/ISPM/ispms.htm">http://www.fao.org/WAI CENT/FAOINFO/AGRI CULT/AGP/AGPP/PQ/E n/Publ/ISPM/ispms.htm</a>
Code of Best Prac- tices for Classical Biological Control of Weeds	Encourages practitioners to ensure that the target weed’s potential im- pact justifies the release of non- endemic agents Encourages release of only safe and approved agents	1999	Practitioners of the biological control of weeds	Invasive weeds Biological control agents with the po- tential to become invasive	Intentional intro- duction	<a href="http://wric.ucdavis.edu/exotic/techtran/Code_of_Best_Practices.htm">http://wric.ucdavis.edu/e xotic/techtran/Code_of Best_Practices.htm</a>
IUCN Guidelines for the Prevention of Biodiversity Loss Caused by Alien Invasive Species	Guidelines to give effect to Article 8 (h) of the Convention on Biological Diversity: “Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species.”  Meant to increase awareness and understanding of the impact of alien species Provides guidelines for: prevention, eradication, control and reintroduc- tion	Feb. 2000	National govern- ments and manage- ment agencies	Non-indigenous plant and animal species that threaten biodiversity	Unintentional and intentional intro- ductions Trade Tourism Ballast water	<a href="http://www.iucn.org/the_mes/ssc/pubs/policy/invasivesEng.htm">http://www.iucn.org/the mes/ssc/pubs/policy/inva sivesEng.htm</a>
SBSTTA: Alien Species:	15 Guiding Principles pertaining to invasive species:	Feb. 2000	National govern- ments	Non-indigenous plant and animal	Unintentional and intentional intro-	<a href="http://www.biodiv.org/sbstta5/Html/SBSTTA-5-">http://www.biodiv.org/sb stta5/Html/SBSTTA-5-</a>

<b>Codes of Conduct/ Guidelines</b>	<b>Relevance to Invasive Species</b>	<b>Date in Effect</b>	<b>Targeted Entities</b>	<b>Organisms Ad- dressed</b>	<b>Pathways/Mean of Transport Ad- dressed</b>	<b>Web Site</b>
Guiding Principles for the Prevention, Introduction and Mitigation of Impacts	Precautionary approach, Three-stage hierarchical approach, Ecosystem approach, State Responsibility, Research and Monitoring, Education and Public Awareness, Border Control and Quarantine Measures, Exchange of Information, Cooperation and Capacity-building, Intentional Introduction, Unintentional Introductions, Mitigation of Impacts, Eradication, Containment, and Control			species	ductions  Import Ballast water	<a href="#">05e.htm</a>
U.S. Coast Guard Voluntary Guidelines on Recreational Activities To Control the Spread of Zebra Mussels and Other Aquatic Nuisance Species	Precautionary techniques for safe removal of aquatic nuisance species from equipment to prevent translocation	Still awaiting public comment	Recreational users of aquatic resources (divers, boaters, anglers, hunters)	Plant and animal aquatic nuisance species Mentioned specifically: Zebra mussel, purple loosestrife, sea lamprey, water hyacinth, Chinese carp, hydrilla, Eurasian water milfoil, Asian swamp eel	Intentional release  Unintentional introduction: Boats, boat anchors, diving equipment, seaplanes, live bait	<a href="http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&amp;docid=fr13ap00-125">http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&amp;docid=fr13ap00-125</a>
Guidelines for the Control of Exotic Vertebrate Animals, Australia	Creates 5 categories of animals: 1. Animals, the Entry and Keeping of which is Prohibited; Animals limited to Restricted Collections; Animals Permitted in Other Collections; Entry and Keeping Unrestricted; and Pests Already Widespread. Guidelines meant to “control the movement and keeping of exotic vertebrates in accordance with the threat that particular types of animals pose to agriculture, the environment and to public safety.”	Under review, meant to update current guidelines	State and territorial governments, private organizations and individuals	Exotic vertebrates (mammals, birds, reptiles and amphibians not indigenous to Australia) which are harmful or potentially harmful to agriculture, fauna conservation and public safety  Does not apply to domestic livestock, dogs and cats	Intentional introduction: import	